Untreated Morbidity and Demand for Healthcare in India: An Analysis of National Sample Survey Data

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This paper studies the problem of poor health outcomes in India from the demand side, and using the unit level data from the 60th round of the National Sample Survey analyses the determinants of not accessing medical care. This analysis is confined to persons who have reported being ill within 15 days of the survey but have not sought either public or private professional medical services. There are systematic variations in accessing healthcare between urban and rural areas, as well as between males and females in each sector. While in the rural areas, the demand for healthcare increases significantly with the education level of the head of the household, in the urban areas the evidence is mixed. Richer economic sections constitute a larger proportion of sick persons who do not access medical care, especially in urban areas. Paradoxically, among poor households, which cite financial reasons for not accessing healthcare, women are less likely to be discriminated in rural than in urban areas.

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The linkage between health, nutrition and economic development has been extensively discussed in literature (Strauss and Thomas 1998). The construction of the human development index (HDI) includes life expectancy – the broadest measure of health of the population in a country. Developed nations without exception have low maternal and infant mortality, as well as lower rates of malnutrition.

1 Introduction

The current health scenario in India is often described as "dismal" or "disturbing" (Bose 2008).[1] Except a few states like Kerala, Goa and Tamil Nadu which have done relatively well, the situation in most parts of the country is a cause for worry. Levels of infant and neo-natal mortality, child malnutrition, female anaemia, non-institutional delivery, etc, are higher in some states in India than countries of sub-Saharan Africa. Going by present trends, India is in danger of missing the health targets set by the Millennium Development Goals (MDGS).

One major reason put forward for this low level of achievement of health in India is the systematic lack of investment by the government, which adversely affects the poor. Public expenditure on health stands at less than 1% of gross domestic product (GDP), with state governments sharing most of the burden. In the light of economic reforms in the 1990s, the squeeze on public expenditure in health has been aggravated further especially at the state level (Mooij and Dev 2002).

There have been a series of studies documenting the precarious situation vis-à-vis the provision of public health facilities in India. Most of them focus on access and quality issues, which deter people from utilising government health services. Recent papers have also investigated the links between non-utilisation and administrative factors such as absenteeism among the health staff in the rural areas, as well as the presence of alternative informal sources of medical care (Banerjee, Deaton and Duflo 2004). They also find instances of untrained and uninformed quacks being frequently consulted in the rural areas. Even in the fee-paying urban private sector, one particular study reports a lack of knowledge among medical practitioners in Delhi for common symptoms of diseases such as tuberculosis (Das and Hammer 2007).

However, the demand for healthcare has received relatively little attention, particularly because of the non-availability of representative household-level datasets. The National Sample Survey (NSS) data is the most suitable for this kind of analysis. Over the last two decades, there have been only three rounds

where healthcare data has been collected in detail – 42nd, 52nd and 60th rounds conducted in 1986-87, 1995-96 and 2004-05 respectively. While the time gap of the surveys is useful in comparing changes in the utilisation rates of public and private facilities, expenditure by households and individuals, etc, changes in questionnaire design and data collection methodology have rendered such comparative analysis difficult.

The latest (60th) round of the NSS included detailed questions on household characteristics, economic profile, expenditure on inpatient cases over the past year, details of diagnostic and other charges, lost income due to illness and caring for the sick, and utilisation of outpatient services due to illness with a recall period of 15 days. Our interest lies in those cases where individuals reported being ill just before the survey, but did not seek medical advice. This seems to be a plausible starting point for an analysis of the demand for healthcare.

We use the unit (household)-level data from the 60th round to understand the reasons behind why individuals do not seek treatment for reported ailments. Intuitively, there are both systemic as well as personal reasons – lack of access and quality of care from the supply side, financial constraints from the economic side as well as constraints of knowledge and perception about the nature and severity of the ailment at a personal level. The report of the 60th round does not delve deeply into the issue, certainly not at a disaggregated level. However, this aspect of demand constraint is important to understand the next steps in the debate – public vs private, burden of expenditure, etc.

Table 1: Profile of Incidence and Neglect of Temporary Illnesses: Top Ten Diseases

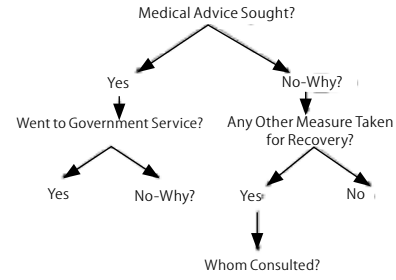
Most Frequently Reported Temporary Illness in the Sample	% of all Cases of All Ailments Reported	Most Frequently Reported Temporary Illness for Which Medical Treatment is Not Sought	% of All Untreated Cases of All Ailments	Diseases with the Highest Proportion of Reported Cases Not Seeking Medical Attention	% of Untreated Cases for Each Ailment
Fever of unknown origin	18.96	Fever of unknown origin	17.21	Hearing disability	43.53
Other diagnosed ailments	14.63	Other diagnosed ailments	13.45	Visual disability (including blindness)	40.35
Respiratory including ENT ailments	7.09	Disorder of joints and bones	9.14	Speech disability	39.52
Disorder of joints and bones	6.56	Respiratory including ENT ailments	8.71	Cataract	38.24
Hypertension	5.20	Other non-diagnosed ailments	5.82	Other non-diagnosed ailments	33.80
Diarrhoea/dysentery	4.98	Diarrhoea/dysentery	4.99	Locomotor disability	30.71
Gastritis/gastric of peptic ulcer	3.66	Cataract	3.97	Psychiatric disorders	26.47
Bronchial asthma	3.63	Locomotor disability	3.82	Eruptive disorders	23.13
Diabetes mellitus	3.56	Dermatological diseases	3.01	Glucoma	23.03
Heart disease	2.70	Visual disability (including blindness)	2.93	Mumps	21.51

Source: NSSO 60th round data.

The paper focuses on three key determinants of demand for healthcare which can be grouped under the generic title of human development – age profile, income group and literacy level. In all the three aspects, we would present our results from the unit level analysis disaggregated by sector (rural and urban) and gender (male and female). What comes out of the exercise is that in all the three determinants, location of the household and the gender of the ailing member plays a significant role in determining whether treatment is taken or not.

The following section describes the data in brief and the steps taken to remove inconsistencies in the NSS dataset. In Section 3, we analyse the data on untreated morbidity for demographic characteristics such as age of household members and intra-household familial relationships; Section 4 reports the results classifying households in terms of literacy level of the household head. Section 5 stratifies the data according to expenditure quintiles, exploring the relationship between the proxy for income/wealth status on access to medical care. We end with some conclusions and proposals for future extension.

Figure 1: Questionnaire Tree (Question sequence for those individuals who were ill within the 15 days previous to the survey)



2 Data Description and Trends across Rounds

Our total sample consists of 383,312 individuals out of which 36,462 (9.5%) reported an ailment within 15 days before the survey was conducted. The design of the questionnaire is such that these individuals who reported an ailment could be divided into those who did seek medical advice and those who did not. As per the field instruction for filling up the survey, medical advice was recorded in those cases where the individual went to a health post, either public or private. Medical advice, in all streams – allopathic, homeopathic, ayurveda and unani, or else to the outpatient department of a private hospital or medical college, in the private sector was stated to be only in case the individual went to registered medical practitioners.

The decision tree of the individual is given in Figure 1. If the answer to the first question was in the affirmative, then the respondent was asked about the type of service he or she availed (public or private), and then other supplementary questions. In case the answer to the first question was negative, then the respondent had to choose from six pre-coded reasons, which are the same across all the three health rounds mentioned above. Finally the respondent was asked whether they took any other measure such as consulting with friends and/or family members, medicine shop owner, etc, and how much it cost.

For the whole sample, 85.2% of those who reported ailing in the last 15 days said that they sought medical advice while the rest (14.8%) did not. In rural areas, 16.6% of those reporting morbidity did not seek medical care, while it was 11.7% for the urban areas. Clearly there is a large difference in their demand for medical services between the two sectors.

Table 1 provides a summary of the top 10 illnesses reported in the sample for three categories: (i) the disease profile of all those who reported being ill within 15 days of the date of survey;

(ii) the major diseases for which persons reporting illness did not seek medical advice; and (iii) the proportion of reported cases of illnesses that were left untreated arranged in descending order of magnitude.

Fever of unknown origin is the most frequently reported illness in the sample. It is also the most frequently neglected, along with known ailments, orthopaedic and respiratory conditions. It is interesting to note that the top four reported illnesses and most frequently neglected diseases are the same albeit with a slightly different ranking. However, in terms of the proportion of reported cases for a particular disease for which medical attention is not sought, the ranking varies considerably. The most neglected ailments are also those that occur in old age, indicating that these may be accepted as a normal condition by the person. Therefore, data in Table 1 points to a decrease in the demand for healthcare as the age profile increases. This will be verified later in Section 3.

The reason for not seeking treatment for illness spells across all the three health rounds is given in Table 2. It is interesting to note that over the last two decades, the proportion of rural respondents citing lack of health infrastructure as a reason for not accessing medical care has gone up significantly from 3 to 12%. There has been a very dramatic decline in the proportion of people stating illness not serious as the reason for not treating morbidities. This is true both for urban as well as for rural areas. What this signifies is that there is a better awareness of the medical condition, but demand for healthcare is constrained due to financial and "other" reasons.

The last category is interesting in itself and merits more attention. It may reveal an increasing trend towards getting treatment informally, either from family members, or from the untrained and unregistered informal sector. Overall, more than one-third of the cases of illness are not considered serious enough to merit a visit to a medical professional. Therefore, apart from supply and economic constraints, increase in the demand for healthcare would depend on the individual's perception of their medical condition.

Table 2: Distribution of Untreated Ailments by Reason of No Treatment

Reason for Not Seeking Medical Treatment	Rural			Urban		
	42nd	52nd	60th	42nd	52nd	60th
No medical facility	3	9	12	0	1	1
Lack of faith	2	4	3	2	5	2
Long waiting	0	1	1	1	1	2
Financial problem	15	24	28	10	21	20
Ailment not serious	75	52	32	81	60	50
Others	5	10	24	6	12	25
Total	100	100	100	100	100	100

Estimates for Others include the cases where the reason is not reported.

For 42nd and 52nd rounds estimates refer to untreated persons.

Source: Table 4.9 of *NSSO* 52nd round Report and Statement 16 of *NSSO* 60th round Report.

Table 3: Sector and Gender Distribution of Untreated Cases

Reason for Not Seeking Medical Treatment	Rural		Urban	
	Male	Female	Male	Female
No medical facility	6.00	5.52	0.41	0.79
Lack of faith	1.67	1.36	0.76	1.13
Long waiting	0.51	0.36	0.29	1.35
Financial problem	13.15	15.12	8.07	12.47
Ailment not serious	14.86	17.38	24.68	25.60
Others	11.84	12.24	11.54	12.91
Total	48.02	51.98	45.75	54.25

Source: NSSO 60th round data.

The gender and sector disaggregation is presented in Table 3. The proportion of male and female reporting untreated morbidity is nearly equal in rural, while there is a large difference in the urban areas. Rate of untreated morbidity in urban females is about 20% higher than the reported untreated cases for males.

Also noteworthy is the fact that among the reasons cited for not accessing healthcare, there is very little difference among males and females in the rural areas. However, for the urban sample, there is a 3 to 4% gender gap for respondents citing financial reasons and self-assessment of their illness. This may point to the persistence of gender bias in the utilisation of healthcare as already noted in studies using the 52nd round data (Sen, Iyer and George 2002).

As we shall see subsequently, this gender disparity among the two sectors persists even if we stratify the data by demographic characteristics, income class or education levels. One important lesson from a policy perspective is that urbanisation may aggravate, rather than mitigate, the gender disparity in health seeking behaviour in future.

3 Demographic Characteristics

Demand for healthcare has been shown to have a non-linear relationship with demographic factors – principally age (Musgrove 2004). Newborn babies and children need greater care, hence the emphasis on neo-natal and child health in policy formulation. Lower infant mortality is positively correlated with better standards of healthcare and is also an indicator of the general level of development of a country or region. The example of Kerala has often been cited – high standards of healthcare has reduced infant mortality and malnutrition to levels seen in advanced countries. On the other hand, Uttar Pradesh has infant mortality and malnutrition rates comparable to the least developed nations of the world (Bose 2008).

The demand for healthcare reduces during the productive years of adolescence and middle age, and then rises again when a person gets old. In the years between 15 and 45, the perception of the gravity of the illness is also much lower. Individuals making rational decisions about their health status may sometimes discount the long-run cost and prefer not spending time and resources in accessing healthcare during the productive age. This can very often result in increasing the probability of developing serious ailment in old age due to untreated morbidity. What it also means is that in case where the public provision of healthcare is deficient, untreated morbidity may actually raise the economic dependence of the old on the younger generation. In the context of declining fertility rates, demographic composition that is now favourable for India may in the long run turn out to be a significant challenge for health policy, as is evident in ageing societies such as Japan, western Europe, US and even China.

Our analysis of the 60th round data supports the points raised above. We disaggregate the data on untreated morbidity by age-groups and by gender – the rationale for dividing the

age-group in six categories is dictated by the non-linearity in demand for health services discussed above. Overall, we find that in both rural and urban areas, the proportion of untreated morbidity is greater for females than for males, and the difference is greater in the urban as compared to the rural areas. Out of the total number of instances of untreated morbidity, 13% is in the first age-group (below five years) and a similar proportion in the second (between 6 and 15 years). The highest rate is found in the third group – the young adult and middle-age population, tapers off in the fourth group (late working age) but rises significantly in the age group of 60-70 years (Figure 2).

Figure 2: Cases of Untreated Morbidity by Age-groups – Rural and Urban (% of cases)

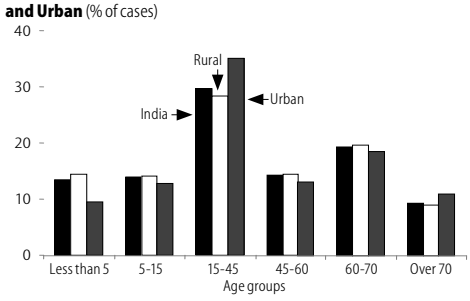


Table 4 gives a summary of the untreated morbidity scenario by age-groups and location. In rural areas, the rates of untreated morbidities for children below 15 are lower for females as compared to males. The difference is not very significant for those above 60. In urban areas, however, the gender inequality is higher – in the lower age-groups the difference is 1% or less in favour of girls, while in all others, women are less likely to get treated in the case of temporary illnesses.

Intra-household factors may also influence the decision whether to seek medical care or not. In traditional societies like India, this may be reflected in the fact that some family members are more likely than others to be treated, keeping in mind that the cases we consider here are health conditions that have occurred within two weeks of the survey, or have continued from before the reference period. Thus illnesses such as aches in bones and joints may be considered as long-term health condition for the elderly that is recorded in the data. On the other hand, dysentery for children cured by administering oral rehydration salts (ORS) before the reference period will not be reflected in the data.

With these caveats in mind, the overall picture is presented in Tables 5 and 6. The data is tabulated according to the relation between the respondent reporting illness and the head of the household. We see that nearly half of all cases of untreated morbidity are accounted for by the household head and his/her spouse. Disaggregating by age-groups in Table 5, we find that the chances of untreated morbidity are higher if the head of household is over 60 years of age. On the other hand, the major proportion of untreated morbidity for spouse is between ages 15 and 60, especially in the lower age bracket.

Unmarried children up to 15 years constitute over 80% of total untreated morbidity for all unmarried children, reflecting to a certain extent the low age at marriage prevalent in India. The third largest proportion of untreated morbidity is for the elderly – father, mother or the in-laws of the household head. Understandably most of the untreated morbidity in this category is in the over 60 age-group.

Disaggregating the data by gender, Table 6 provides some clues regarding the extent of gender differences in treatment of illness vis-à-vis the relation to the head of household. We find that elderly female members of the household (mothers or mothers-in-law of the head of household) have far higher rates of untreated morbidity as compared to elderly male members – the difference is nearly 6% for the whole sample.As noted, it is the male head of household of the group who are most likely to ignore temporary illnesses.

It is difficult to assign reason for this finding from the data without an explicit model of household decision-making structure. Overall, it seems that elderly heads of households may not value their health condition given the fact that they are no longer the earning members of the family. The social dynamics may also be the reason why illnesses of elderly women are not given as much importance as that of men when the head of household is

Table 4: Untreated Morbidity by Gender and Age-groups (in %)

	India			Rural			Urban		
Age Group	Male	Female	Total	Male	Female	Total	Male	Female	Total
Less than five years	7.03	6.40	13.42	7.56	6.80	14.36	4.81	4.72	9.53
Five to fifteen	7.10	6.78	13.87	7.38	6.76	14.14	5.94	6.84	12.77
Fifteen to forty-five	12.60	17.12	29.72	11.77	16.65	28.42	16.05	19.10	35.15
Forty-five to sixty	6.57	7.63	14.20	6.68	7.79	14.47	6.12	6.96	13.07
Sixty to seventy	9.32	10.07	19.39	9.62	9.99	19.61	8.10	10.38	18.48
Over seventy years	4.96	4.42	9.38	5.02	3.98	9.00	4.73	6.26	11.00
Total	47.58	52.42	100	48.02	51.98	100	45.75	54.25	100

Source: NSS 60th round.

Table 5: Untreated Morbidity by Age Group and Relationship to the Head of Family

	Age Group						
Relation to Head	Less than 5 years	5 to 15	15 to 45	45 to 60	60 to 70	Over 70 Years	Total
Self	–	–	8.90	7.34	10.41	4.13	30.78
Spouse of head	–	–	10.26	4.53	2.09	0.38	17.26
Married child	–	0.03	1.66	0.04	0.05	–	1.79
Spouse of married children	–	–	1.83	0.03	–	–	1.87
Unmarried child	10.26	11.90	5.36	0.04	–	0.01	27.57
Grandchild	2.91	1.49	0.25	–	–	–	4.66
Father/mother/father and mother-in-law	–	–	0.17	1.74	6.22	4.28	12.41
Brother/sister/brother and sister-in-law/other relatives	0.26	0.45	1.27	0.47	0.62	0.57	3.64
Servants/employees/ other non-relatives	–	–	0.02	0.01	–	0.01	0.03
Total	13.42	13.87	29.72	14.20	19.39	9.38	100.00

Source: NSS 60th round.

Table 6: Untreated Morbidity by Sex and Relationship to the Head of the Family

Relation to Head	Male	Female	Total
Self	24.05	6.74	30.78
Spouse of head	0.11	17.15	17.26
Married child	1.44	0.34	1.79
Spouse of married children	0.04	1.82	1.87
Unmarried child	14.76	12.81	27.57
Grandchild	2.64	2.02	4.66
Father/mother/father and mother-in-law	3.10	9.31	12.41
Brother/sister/brother and sister-in-law/other relatives	1.44	2.20	3.64
Servants/employees/other non-relatives	0.00	0.03	0.03
Total	47.58	52.42	100.00

Source: NSS 60th round.

presumably their son. It is therefore unclear whether preference for male children within the household is reflected in health outcomes for the elderly.

4 Education Level

The connection between education level and health status is well established. In the case of Kerala, for example, studies have pointed to the fact that there is almost universal school education, and also a much higher standard of health compared to other states in the country – especially in terms of maternal and child mortality. Paradoxically, the NSS report also indicates that the proportion reporting ailment is also the highest in India. This may be due to causal linkages between better education standards and greater health-seeking behaviour.

From another standpoint, number of years of education is one of the determinants of income level of an individual. We would therefore expect to find that for persons who are either illiterate or with a few initial years of school education, financial factors as well as their self-assessed health condition are the primary reasons for not accessing organised medical service. If access to health centres is difficult, the opportunity cost of transport and mandays lost can also become critical. This will disproportionately affect persons with lower rather than higher education – and consequently income – levels.

To describe the data on the demand for healthcare by varying levels of education, we first stratify the data using the level of schooling of the head of the household as a proxy for the general standard of education of the household. If the household head is over 60, there is a higher probability that he/she would be less educated than the next generation. In case of a representative household of middle-aged parents and young children, the level of education of the head of the household would be better correlated to the demand for health services for the entire family. For the purposes of our analysis, we do not separate out the two cases mentioned here, and report the results using the full sample of those who reported ill but did not seek medical advice.

Table 7 describes the data for the whole sample, while Table 8 presents the picture in the rural and urban areas separately. We divide the sample into four classes as far as the education of the household head is concerned – illiterate, up to primary, up to secondary, and higher secondary and above. As expected, the share of untreated morbidity for those cases where the head of household is illiterate is over 45% which drops progressively to below 7% in the highest education level. Therefore, overall, there is a distinct inverse relationship as far as household head's education level and demand for healthcare is concerned.

The data in Table 7 also confirms the hypothesis that having lower levels of education in a household increases the chances of financial difficulty in accessing healthcare. Financial reason is cited by 16.3% of the household heads who are illiterates. On the contrary, the major reason for not accessing healthcare for other education groups is "ailment not considered serious". What is clear is that the cost of medical care restricts access for those with low education levels. Furthermore, health infrastructure is also more of a hindrance in accessing care for persons with lower education levels. The linkages between supply and demand sides, therefore, need to be looked at more carefully in multiple contexts of human development.

The overall picture masks significant differences between the rural and urban areas as far as education level is concerned, as seen from Table 8. For rural areas, the broad conclusion of Table 7 still holds, except for the fact that the "return to education" is higher. That is, the decline in the rate of untreated morbidity decreases faster across education levels in the rural area compared to the general picture. From a policy perspective, it points to the importance of adult education, which may have a first-round impact on reducing untreated morbidity. In the long term, demand for healthcare would improve alongside improvement in the general level of education.

For the urban area, the picture is very different. The proportion of untreated morbidity is the highest for those instances where the head of household has at least secondary level education. It is nearly 6% higher than those where the head of household is illiterate. This result is counter-intuitive, but may be explained by the fact that most households with low levels of education are likely to be daily-wage manual labourers, who cannot afford not to treat temporary ailments such as fever, injuries or respiratory problems. Given the greater availability of private healthcare facilities in urban areas and higher wage rates, the proportion of illiterates who reported not accessing healthcare due to infrastructure or financial reason is much lower than rural areas. In fact, 75% of untreated morbidities are either due to the individual perception of their illness not being serious enough or "other" reasons given by the respondent. As we shall show later, most of those who gave "other" reasons have taken medical

Table 7: Reasons for Not Accessing Treatment by Education Level of Household Head (in %)

Reason for Not Seeking	Education Level of the Head of the Family				
Medical Treatment	Illiterate	Primary	Secondary	Higher Sec	Total
No medical facility	4.70	2.61	1.79	0.41	9.52
Lack of faith	1.31	0.96	0.49	0.05	2.81
Long waiting	0.19	0.26	0.49	0.08	1.02
Financial reasons	16.35	6.76	3.04	0.62	26.77
Ailment not serious	12.88	10.68	8.38	3.79	35.73
Others	10.22	6.38	5.64	1.92	24.16
Total	45.65	27.65	19.83	6.87	10.00

Higher Sec: Higher Secondary.
Source: NSS 60th round.

Table 8: Demand for Outpatient Care Classified by Education Level of Head of Household (in %)

Reason for Not Seeking	Education Level of the Head of the Family									
	Rural					Urban				
Medical Treatment	Illiterate	Primary	Secondary	Higher Sec	Total	Illiterate	Primary	Secondary	Higher Sec	Total
No medical facility	5.70	3.21	2.18	0.42	11.52	0.53	0.12	0.18	0.35	1.19
Lack of faith	1.40	1.07	0.52	0.03	3.03	0.90	0.49	0.36	0.13	1.88
Long waiting	0.14	0.27	0.38	0.09	0.87	0.41	0.21	0.96	0.06	1.64
Financial reasons	17.75	7.04	2.83	0.64	28.26	10.50	5.59	3.93	0.52	20.54
Ailment not serious	13.35	10.78	6.40	1.70	32.24	10.93	10.26	16.6	12.49	50.28
Others	11.35	6.64	5.08	1.01	24.09	5.51	5.29	7.98	5.67	24.45
Total	49.70	29.01	17.39	3.90	100.00	28.79	21.96	30.02	19.23	100.00

Higher Sec: Higher Secondary.
Source: 60th round NSS.

advice from their friends, family members, or medical shop attendants. This implies that compared to rural areas, healthcare demand being met by informal sources such as medical shop attendant, friends and family, etc, in urban areas may actually be higher.

5 Economic Groups

The proportion of untreated morbidity are expected to vary across various economic groups as well. However, the direction of causality is more difficult to hypothesise. Higher income groups may have a lesser degree of financial constraint, but that may not necessarily translate into higher demand for healthcare. The interplay between the various socio-economic factors – two of which have already been examined – may determine the proportion of reported illnesses that go untreated.

The NSS questionnaire enables us to stratify the sample by monthly expenditure level of the household. We divide the whole sample into five expenditure groups on the basis of increasing monthly household expenditure and tabulate the results for untreated morbidity for each quintile.

As per the expenditure group classification, Table 9 provides the summary for the entire sample which reported ailing within the survey recall period of 15 days. We find that for rural and urban areas combined, there is little variation in the distribution of untreated cases across expenditure quintiles. However, two points emerge from the table: (i) in the poorer quintiles, financial reasons dominate, and (ii) in the higher quintiles, the perceived health condition is the major reason for not seeking care. Interestingly, access to health infrastructure as a constraint to seeking care in the fourth quintile is the highest among all expenditure groups.

Table 10(a) and 10(b) present the data disaggregated by rural and urban sectors. Within each expenditure quintile, we present the share of the reasons for not accessing healthcare as a proportion of total untreated morbidity. The contrasts are very clear: (i) the proportion of untreated morbidity due to financial reason within each expenditure quintile shows a secular decline from poorest to richest expenditure levels both for rural, but not for urban areas; (ii) access to healthcare facility is not a constraint in urban areas, but is still reported in the rural sector across all expenditure quintiles; (iii) from the second quintile onward, more than half the share of untreated morbidity is due to self-assessment of the disease as well as "other" reasons; (iv) even for the richest quintiles in the rural areas, issues of access, quality and financial constraints cannot be disregarded; and (v) among the poorest urban quintile, the proportion of reported untreated morbidity due to financial reason is nearly 8% more than the poorest rural quintile.

Supplementary questions were asked whether those reporting no treatment for ailments took any other measure, for example, consulting friends and family, a medical shop, etc. In Table 11, we tabulate the data by expenditure group where the respondent gave the reason for no treatment as "other". For the highest expenditure quintile in the urban area, this reason itself constitutes half of the cases of untreated morbidity. The distribution is more even in the case of rural areas.

To summarise, we find that economic condition of the households can partly explain the non-treatment of morbidity in terms of the reasons asked during the survey. A relaxation of the financial constraint, i e, moving from lower to higher expenditure groups, is accompanied by a greater proportion of untreated morbidity being due to the individual's own health perception, as well as due to access to informal sources of healthcare. This contrast is greater for urban as compared to rural areas. In the latter, physical access to health facilities and the quality of treatment still remain important – something which needs urgent attention at the policy level.

Table 9: Distribution of Untreated Illness (according to Family Expenditure Category and Stated Reason for Not Seeking Medical Advice) (% in sub-sample)

Expenditure Quintile	Reason for Not Seeking Treatment						
	No Medical Facility Nearby	Lack of Faith	Long Wait at the Facility	Financial Reasons	Ailment Not Serious	Others	Total
Very poor	2.17	0.49	0.15	7.41	5.04	3.96	19.22
Poor	1.77	0.81	0.07	7.25	6.51	4.41	20.81
Middle	1.75	0.57	0.21	6.00	6.99	3.54	19.06
Richer	2.47	0.47	0.20	4.01	8.20	5.75	21.10
Richest	1.36	0.47	0.39	2.10	8.98	6.51	19.80
Total	9.52	2.81	1.02	26.77	35.73	24.16	100.00

Source: NSS 60th round.

Table 10(a): Rural India

Expenditure Quintile	Reason for Not Seeking Medical Treatment						
	No Medical Facility	Lack of Faith	Long Waiting	Financial Reasons	Ailment Not Serious	Others	Total
Poorest	2.61	0.56	0.17	8.13	5.48	4.53	21.49
	(12.16)*	(2.61)	(0.81)	(37.84)	(25.51)	(21.07)	(100.00)
Poor	2.18	0.97	0.08	8.26	6.74	4.89	23.12
	(9.42)	(4.20)	(0.35)	(35.74)	(29.15)	(21.14)	(100.00)
Middle	2.15	0.58	0.15	6.26	7.43	3.87	20.44
	(10.50)	(2.86)	(0.74)	(30.61)	(36.37)	(18.92)	(100.00)
Richer	3.07	0.51	0.12	3.76	7.23	5.70	20.39
	(15.04)	(2.51)	(0.60)	(18.45)	(35.46)	(27.94)	(100.00)
Richest	1.51	0.40	0.34	1.85	5.35	5.11	14.56
	(10.38)	(2.74)	(2.35)	(12.71)	(36.74)	(35.08)	(100.00)
Total	11.52	3.03	0.87	28.26	32.24	24.09	100.00

* The values within brackets are proportions within each expenditure quintiles.
Source: NSS 60th round.

Table 10(b): Urban India

Expenditure Quintile	Reason for Not Seeking Medical Treatment						
	No Medical Facility	Lack of Faith	Long Waiting	Financial Reasons	Ailment Not Serious	Others	Total
Poorest	0.30	0.21	0.07	4.39	3.20	1.57	9.74
	(3.06)*	(2.17)	(0.67)	(45.11)	(32.89)	(16.10)	(100.00)
Poor	0.07	0.12	0.03	3.02	5.55	2.41	11.19
	(0.59)	(1.04)	(0.23)	(26.99)	(49.58)	(21.58)	(100.00)
Middle	0.10	0.50	0.48	4.94	5.15	2.16	13.33
	(0.79)	(3.75)	(3.58)	(37.08)	(38.60)	(16.21)	(100.00)
Richer	0.00	0.30	0.50	5.05	12.25	5.97	24.06
	(0.00)	(1.23)	(2.08)	(20.97)	(50.91)	(24.81)	(100.00)
Richest	0.73	0.76	0.58	3.14	24.13	12.34	41.68
	(1.74)	(1.82)	(1.38)	(7.53)	(57.91)	(29.61)	(100.00)
Total	1.19	1.88	1.64	20.54	50.28	24.45	100.00

* The values within brackets are proportions within each expenditure quintiles.
Source: NSS 60th round.

Table 11: Distribution of Cases of Untreated Morbidity due to "Other Reasons"

Expenditure Quintile	Rural	Urban	Total
Very poor	18.80	6.41	16.37
Poor	20.29	9.87	18.25
Middle	16.06	8.84	14.64
Richer	23.65	24.41	23.80
Richest	21.20	50.47	26.93
Total	100.00	100.00	100.00

Source: NSS 60th round.

6 Conclusion

Analysis of unit-level data from the NSS 60th round throws up interesting set of issues related to the demand for healthcare in India, and the challenge faced in formulating public policy towards the health sector. In this paper, we investigated the health-seeking behaviour of the respondents of the survey, and explored three avenues through which health and human development outcomes may be related – demographic characteristics, education level of the head of the household, and expenditure groups. We find that the NSS data points to large differences in the demand for healthcare when we disaggregate according to gender and geographical location. The intra-family relationship as well as the level of education of the head of household exert considerable influence on health-seeking behaviour. As expected, for lower expenditure groups, financial reasons play an important role in the lack of demand for healthcare. Interestingly, the proportion of cases within the lowest quintile citing lack of resources is higher in urban than in rural areas.

The paper has several implications for the future direction of health policy in India. It is clear that health-seeking behaviour in rural and urban areas is different across demographic and socio-economic groups. The two sectors, therefore, need to have different strategies for improving health conditions. Infrastructure deficit still persists in rural areas affecting all economic classes. Adequate resources need to be allocated for expanding the network of public health facilities in rural areas. Financial problems continue to prove a major constraint for lower expenditure quintiles both in the urban and rural areas. Reducing the cost of access to the formal healthcare system through better quality standards in public facilities and spreading the cost through social security programmes need to be looked at carefully. Age and gender increase the inequity in access to healthcare, which can only be addressed through mass campaigns and outreach by dedicated community health workers. A multi-pronged strategy is needed to address the lack of demand for healthcare that will, in the long run, lead to a betterment of the overall health status of the population.

NOTE

1 See Bose (2008) for a discussion on child and maternal health in the light of the latest National Family Health Survey (NFHS-3) data.

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